

I claim:

1. Image processing apparatus comprising an input device;  
an output device; and a processor coupled to the input and  
5 output devices, the processor being adapted to compare the  
tone range of an image input via the input device and the  
tone range provided by the output device, and
  - i. if the input tone range falls wholly within the  
output tone range, to cause the output device to  
10 render an absolute reproduction of the image, or
  - ii. if the input tone range overlaps the output tone  
range, to cause the output device to render a  
reproduction of the image in which that part of  
the input tone range falling outside the output  
15 tone range has substantially been mapped into  
the output tone range.
2. Apparatus according to claim 1, wherein step (ii)  
further comprises determining if the input colour gamut of  
the input device and image falls outside the output colour  
20 gamut of the output device and output medium by more than  
a predetermined amount and, if it does, mapping the input  
colour gamut to the output colour gamut using a perceptual  
mapping algorithm.
3. Apparatus according to claim 2, wherein the  
25 predetermined amount is about 12%.
4. Apparatus according to claim 1, wherein the processor  
operates on the tone ranges in profile connection space.
5. Apparatus according to claim 1, wherein in step (ii),  
if only one extreme of the input tone range falls outside  
30 the output tone range, the method comprises maintaining the  
other extreme substantially constant and mapping the  
remainder of the input tone range proportionally, providing  
a pleasing appearance.

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